

### **REMARKS**

Claims 11-20 are pending in the present application. Claims 1-10 have been canceled and claims 11-20 have been added. Claims 11 and 15 are independent. Reconsideration of this application, as amended, is respectfully requested.

#### **Rejection under 35 USC § 112**

Claims 1-5 stand rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which Applicant regards as the invention. This rejection is respectfully traversed.

As the Examiner will note, claims 1-10 have been cancelled and have been replaced with claims 11-20. Applicants respectfully submit that Claims 11-20 have been presented, taking into consideration the specific deficiencies pointed out by the Examiner. Applicants respectfully submit that claims 11-20 are definite and clear. Accordingly, reconsideration and withdrawal of the Examiner's rejection under 35 USC § 112, second paragraph, are respectfully requested.

#### **Rejection under 35 USC § 102**

Claims 1-10 stand rejected under 35 USC § 102(b) as being anticipated by Howard (U.S. Patent 6,250,450). This rejection is respectfully traversed.

The present invention is directed to a method of lining a materials transfer chute with a renewable wear surface and a materials transfer chute with a renewable wear surface. Independent claim 1 of the present invention is directed to the method and recites a combination of steps including "locating, during the design and construction of the chute, *a plurality of cascade formations that extend transversely across the interior of the chute*, each cascade formation, including *a transversely extending tray* that projects into the flow path of the material to be conveyed through the chute to define a surface facing the incoming stream of material, which surface is adapted to support a pre-determined quantity of the material in use," "dimensioning the cascade formations such that the *free edges of the trays are co-extensive with imaginary lines of curvature that connect the free edges of the trays* and that extend along the intended flow path of the material to be conveyed through the chute" and "locating the cascade formations such that the dead boxes accumulate, in use, no more of the material conveyed through the chute than is sufficient to form a renewable wear surface made up of accumulated material upon which conveyed material impinges in moving through the chute, the trays and the material accumulated thereon being adapted, in use, to form a composite dead box, the surface of which constitutes a wear surface that is *co-extensive with the imaginary lines of curvature.*"

Independent claim 5 is directed to the materials transfer chute, which recites a combination of elements including a "*plurality of cascade formations that extend transversely across the interior of the chute*, each cascade formation including a

*transversely extending tray* that projects into the flow path of the material to be conveyed through the chute to define a surface facing the incoming stream of material, which surface is adapted to support a predetermined quantity of the material in use," "the cascade formations being dimensioned such that the *free edges of the trays are co-extensive with imaginary lines of curvature that connect the free edges of the trays* and that extend along the intended flow path of the material to be conveyed through the chute" "the cascade formations being located such that the dead boxes accumulate, in use, no more of the material conveyed through the chute than is sufficient to form a renewable wear surface made up of accumulated material upon which conveyed material impinges in moving through the chute, the trays and the material accumulated thereon being adapted, in use, to form a composite dead box, the surface of which constitutes a wear surface that is *co-extensive with the imaginary lines of curvature.*"

With the above-method and apparatus according to the present invention, a desired flow path of material through the chute is used as the principle means of determining the location of the cascade formations that are used, in combination, to provide an accurately dimensioned composite dead box that, in turn, provides an accurately dimensioned passage or flow path through the chute. Applicant respectfully submits that the Howard reference relied on by the Examiner fails to teach or suggest the presently claimed invention.

In particular, referring to the Howard reference, this reference is directed to an impact liner for an impact surface in a chute of a conveyor. Referring to Figure 1 of Howard, the liner **26** includes a multiplicity of elastomer knobs **30** that are molded integrally with a base plate **27** (see Fig. 3). Referring to Fig. 2 of Howard, it can be clearly understood that the knobs **30** do not form a “transversely extending tray” as recited in independent claims 11 and 15 of the present invention. The patent to Howard uses a plurality of knobs **30** formed on the chute liner **26** in order to provide a renewable wear surface. The knobs **30** combine to trap material between them, which trapped material, constitutes the renewable wear surface. Superficially, the knobs, in combination, give the appearance of a cavity-filled liner, but this is clearly not the case. Specifically, referring again to Fig. 2 of Howard, there are spaces formed between each of the knobs **30** that are located adjacent to each other in the transverse direction. In view of this, Howard fails to disclose trays that extend transversely across the chute as recited in independent claims 11 and 15 of the present invention.

The advantage of trays that extend transversely across the chute as in the present invention is that they are more robust and allow for more convenient servicing or replacement. The chute of the present invention can simply be repaired where the damage occurs. In normal usage, the chute and chute components, including the trays, are of steel, which is either welded or bolted in place. In each case, permitting repair or replacement of

a part rather than the whole (all the trays). This is not possible with the liner of Howard, which will require replacement of the entire liner **26**, if the knobs **30** are damaged.

In addition, the liner described by Howard is simply attached to the chute wall and follows the curvature of the chute. Howard does not describe the use of knobs of different sizes, for instance, to define a curved flow path that could possibly differ from the curvature of the chute. However, in the present invention, such design freedom is provided. Specifically, in the present invention, the cascade formations are dimensioned, "such that the free edges of the trays are co-extensive with imaginary lines of curvature that connect the free edges of the trays and that extend along the intended flow path of the material to be conveyed through the chute." Since there is no indication in the Howard reference that any of the knob **30** are of a different length than an adjacent knob, Applicants submit that the liner of Howard merely follows the shape of the chute **24** and, therefore, the free edges of the knobs are not "co-extensive with imaginary lines of curvature that connect the free edges of the trays", as recited in independent claims 11 and 15 of the present invention.

As mentioned above, Howard does not make use of a wear surface that follows the curvature of the flow path. In addition, Howard fails to specify that the cascade formations include transversely extended trays that accumulate, in use, no more of the material conveyed through the chute than is sufficient to form a renewable wear surface, which is a

prerequisite for accurate design of the renewable wear surface that will form the composite dead boxes in use.

With regard to dependent Claims 12-14 and 16-20, Applicant respectfully submits that these claims are allowable due to their respective dependence upon allowable independent Claims 11 and 15, as well as due to the additional recitations of these claims.

In view of the above-amendments and remarks, Applicant respectfully submits that Claims 11-20 clearly define the present invention over the Howard reference relied upon by the Examiner. Accordingly, reconsideration and withdrawal of the Examiner's rejection under 35 USC § 102 are respectfully requested.

### **CONCLUSION**

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but merely to show the state-of-the-art, no further comments are deemed necessary with respect thereto.

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

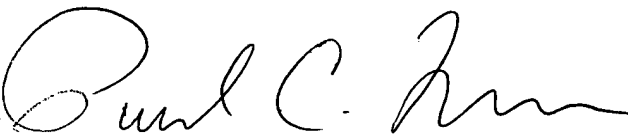
Applicant respectfully petitions under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$60.00** is attached hereto.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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